Nov. 3, 1931. J. T. FAGAN 1,830,598

METHOD AND APPARATUS FOR COLORING LAMPS

Filed Oct. 15, 1928

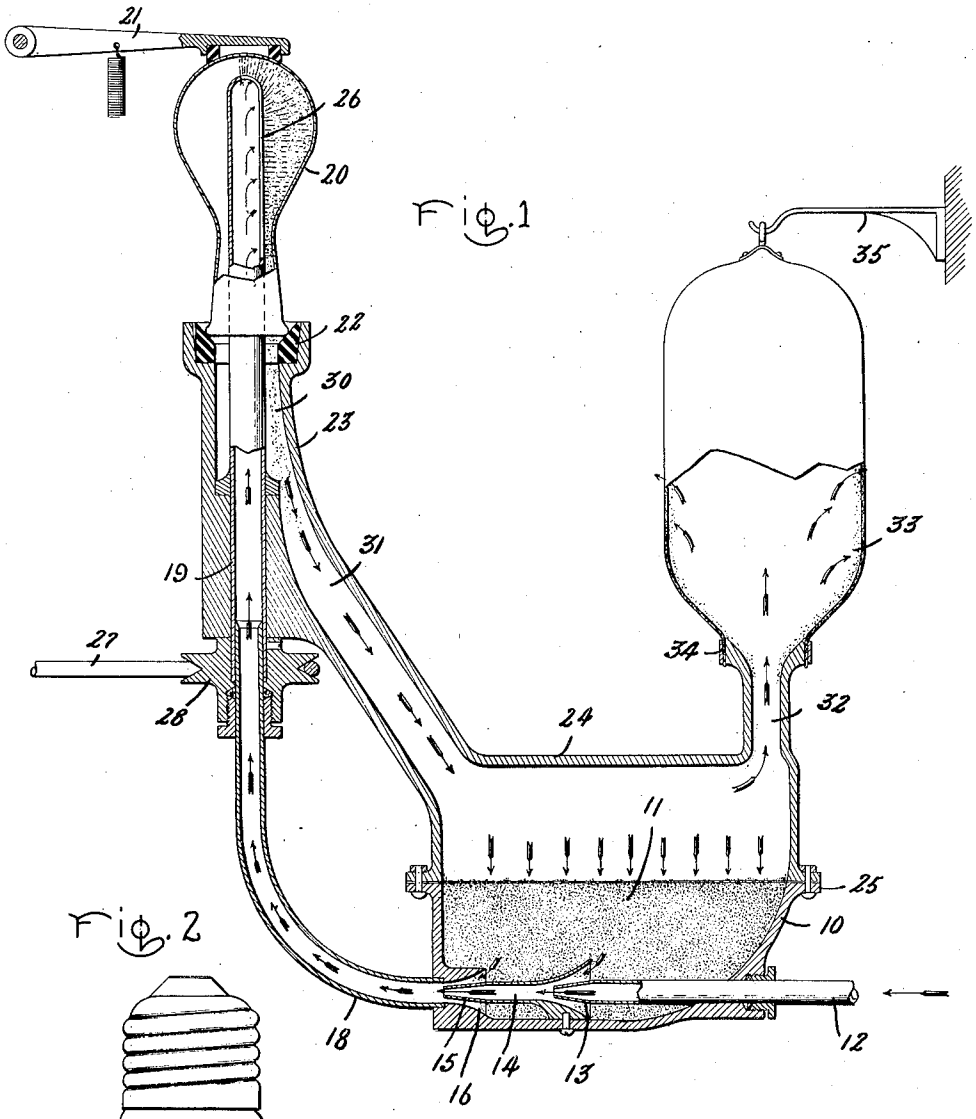
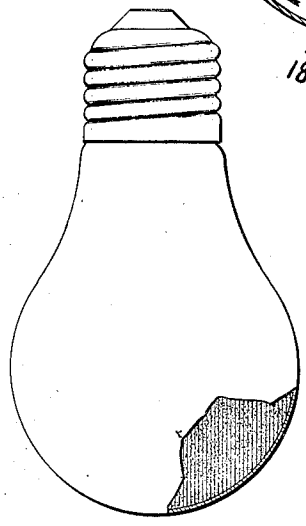


Fig. 1

Fig. 2



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UNITED STATES PATENT OFFICE

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METHOD AND APPARATUS FOR COLORING LAMPS

Application filed October 15, 1928. Serial No. 312,505.

My invention relates to methods and apparatus for coloring hollow glass articles such as electric lamp bulbs on the inside thereof. More particularly my invention relates to coloring by applying powdered coloring mediums to the frosted inside surface of the bulb or other article. According to my invention, the powdered material is drawn from a container by an air blast and directed against the frosted surface, the excess material being allowed to return to the original container, thus avoiding waste. Other features and advantages of my invention will appear from the following description of a species thereof and from the accompanying drawings.

In the drawings Fig. 1 is a sectional elevation of an apparatus constructed in accordance with my invention; Fig. 2 is an elevation of an electric incandescent lamp partially broken away to show the coloring on the inside thereof such as was applied by the apparatus shown in Fig. 1.

Referring now to the drawings and more particularly to Fig. 1, the apparatus shown comprises a container 10 for a quantity of coating material such as dry powdered pigment 11 which is applied to the article to be coated by means of air pressure from an outside source directed to the inside of the container 10 through the pipe 12. The delivery end 13 of the pipe 12 extends into the rear enlarged end of a nozzle 14 attached to the bottom of the container 10. The delivery end 15 of the nozzle extends into an opening 16 formed in the container 10, said opening communicating with the passage of curved conduit 18 whose opposite end terminates in the lower portion of the somewhat larger distributing tube 19. The article to be coated is the bulb 20. This is placed over the upper end of the distributing tube 19 and held in position by a spring pressed arm 21 so that its lower portion fits snugly against the hollow resilient washer 22. This washer rests in the upper portion of a bracket 23 through which the distributing tube 19 is supported, the bracket as shown being a continuation of the housing 24 which is bolted to the rib portion 25 of the container 10.

The coating material 11 is carried into the enlarged opening of the nozzle 14, the opening 16 and conduit 18 by compressed air directed to nozzle 14 through pipe 12. The coating material is carried up through the conduit 18 to the upper end of the distributing tube 19 where it is projected through one or more vertical slots 26 formed in the said tube. To uniformly distribute the coating material over the inside surface of the bulb, the tube 19 may be rotated through the belt 27 and pulley 28 attached to the lower end thereof. The compressed air after delivering the coating material to the inside of the bulb passes out through the bottom of the bulb into chamber 30 and comunicating passage 31 to the inside of the housing 24 carrying with it the excess coating material which is returned to the container 10. The compressed air from the housing 24 travels through the outlet passage 32 into the bag 33 which is composed of a fabric which allows the air to escape to the atmosphere but retain any coating material passing therein. The bag 33 is attached at its lower end 34 to the housing 24 and retained in position by a bracket 35.

A completed lamp is shown in Fig. 2 partially broken away to show the coating on its frosted inner surface.

What I claim as new and desire to secure by Letters Patent of the United States, is:

1. The method of coloring open-ended hollow glass articles which consists in placing in a container a supply of coloring powder, supporting the article with its open end sealed over the end of a conduit, directing an air blast through said container so as to draw into said blast a supply of said powder and to deliver it through said conduit into said article, causing the mixture of return air and excess powder to be directed into a separating bag and causing the separated powder to be returned to the supply in the container.

2. The method of coloring open-ended hollow glass articles which consists in placing in a container a supply of coloring powder, supporting the article with its open end sealed over the end of a conduit, directing an air blast through said container so as to

draw into said blast a supply of said powder and to deliver it through said conduit into said article, and causing the mixture of return air and excess powder to be directed into a separating bag supported over said container so that the air may escape and the separated powder may drop into the powder supply in the said container.

In witness whereof, I have hereunto set my hand this 12th day of October, 1928.

JOHN T. FAGAN.